The electrons in the last energy level are called ***Valence Electrons.*** This is important because it is the number of valence electrons that will determine how an atom will react with another.

\*\*Valence simply means *outermost.*

**3.**

The number of electrons each shell can hold can be determined by using the equation 2(n²). The variable ***n*** represents the number of the energy level. Let’s use the first energy level as an example.

2(n²) = 2(1²) = 2(1) = 2 electrons

Let’s try it again with the second and third energy levels:

2(n²) = 2(2²) = 2(4) = 8 electrons

2(n²) = 2(3²) = 2(9) = 18 electrons

\*\*Remember, when you square any number you are multiplying it by itself.

**3**

**2**

**1**

**2.**

**1.**

These rings represent

***Energy Levels*** or ***Shells***

**The first energy level is closest to the nucleus**

Each energy level can hold a certain number of electrons. The farther away from the nucleus, the more electrons the energy level can hold

**Nucleus**